

TECHNICAL STATEMENT
KAIX(FM) CHEYENNE, WYOMING, CH. 201A
FCC FORM 340
EDUCATIONAL MEDIA FOUNDATION
OCTOBER 2013

This Technical Statement is in support of a minor change application for KAIX(FM) Cheyenne, Wyoming, facility ID 86624.

KAIX seeks to relocate to an existing tower site, FCC tower registration number 1008318. It proposes to operate with circular polarization using a Shively 6812B, two bay with full wavelength spacing between the bays. The antenna will be mounted 33 meters above ground and 1898 meters Height Above Mean Sea Level and 62 meters Height Above Average Terrain. KAIX proposes to operate with 1.8 KW (1,800 watts) Effective Radiated Power.

Figure 1 is a detailed channel interference study conducted for the proposed operation. There will not be any prohibited overlap with any other pertinent Co or Adjacent channel stations.

Figure 2 is a more detailed interference map showing no overlap with third adjacent channel station, KDNR(FM) Cheyenne, Wyoming, facility ID 84104.

Figure 3 is a present and proposed 60 dB μ contour map for KAIX.

It was determined that the proposed operation of KAIX at the new proposed transmitter site will meet all of the required Commission rules for a Non-Commercial FM broadcast station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

KAI X CHEYENNE, WY, CH. 201A

REFERENCE CH# 201A - 88.1 MHz, Pwr= 1.8 kW, HAAT= 62.4 M, COR= 1898 M
 41 09 35.0 N. Average Protected F(50-50)= 16.88 km
 104 43 18.0 W. Omni-directional

DISPLAY DATES
 DATA 10-19-13
 SEARCH 10-20-13

CH CITY	CALL	TYPE ANT STATE	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)
201A	KAI X Cheyenne	LIC _CX WY	87.6 267.7	1.51 BLED20100603ACJ	41 09 37.0 104 42 13.0	1.900 63	44.5 1890	11.9 Educational Media Foundati	-65.0*	-79.5*
204A	KDNR South Greeley	CP _DCX WY	255.6 75.4	26.28 BPED20120418AAT	41 06 02.0 105 01 29.1	1.000 129	1.5 2153	24.2 Western Inspirational Broa	12.3	0.3
204A	KDNR South Greeley	LIC _CX WY	255.6 75.4	26.28 BMLD20080929AUD	41 06 02.0 105 01 29.1	0.500 129	1.6 2153	22.8 Western Inspirational Broa	12.3	1.8
202A	KGCO Fort Collins	LIC _VX CO	220.4 40.0	78.96 BLED20060117AFJ	40 37 03.0 105 19 40.0	0.150 364	43.6 2552	27.7 Cedar Cove Broadcasting, I	21.6	29.8
201C3	KVOD Lakewood	CP _DCX CO	195.9 15.5	164.93 BPED20120417AAA	39 43 49.0 105 15 00.0	2.100 275	121.9 2334	48.2 Public Broadcasting Of Col	27.5	64.6
201C3	KLMI Rock River	LIC _ WY	292.3 111.1	166.12	41 42 37.5 106 34 10.6	25.000 167	125.8 2443	48.9 User	28.7	71.6
201C3	KVOD Lakewood	LIC _CX CO	194.4 14.1	170.52 BLED20100805AJY	39 40 18.0 105 13 05.0	1.200 321	115.1 2348	44.4 Public Broadcasting Of Col	39.7	74.1
203A	KUWY Laramie	LIC _CX WY	285.5 105.0	63.68 BLED20080303AJB	41 18 36.0 105 27 17.0	0.135 298	0.8 2703	18.7 University Of Wyomi ng	51.1	43.3
202C1	1277517 Fort Morgan	APP _DCX CO	155.0 335.5	151.33 BNPED20071019BCM	39 55 21.9 103 58 18.4	11.000 334	80.7 1815	53.2 The Helpline	50.7	68.2
06 2	KWNB-DR Hayes Center	APR _HN NE	99.6 282.0	316.78 BPRM20080801BDB	40 37 32.0 101 01 45.0	3.000 221	1.6 1160	20.5 Pappas Telecasting Of Cent	265.0R	52.3M
06 2C	KWNB-TV Hayes Center	AP _HN NE	99.6 282.0	316.78 BDSTA20121024ABA	40 37 32.0 101 01 45.0	6.300 221	1.6 1160	20.5 Pappas Telecasting Of Cent	265.0R	52.3M
06 2C	KWNB-TV Hayes Center	AP _HN NE	99.6 282.0	316.78 BDSTA20110930BHG	40 37 32.0 101 01 45.0	6.300 221	1.6 1160	20.5 Pappas Telecasting Of Cent	265.0R	52.3M
06 2C	KWNB-TV Hayes Center	LI _HN NE	99.6 282.0	316.78 BLCDT20090604ABL	40 37 32.0 101 01 45.0	11.900 221	1.6 1160	20.5 Pappas Telecasting Of Cent	265.0R	52.3M
254A	KRQU« Laramie	LIC _NCX WY	285.6 105.1	63.59 BLH20120723ADO	41 18 39.0 105 27 12.0	0.110 327	0.0 2730	0.0 Murray Grey Broadcasting,	10.0R	54.1M
202A	KLJV Scottsbluff	LIC _CX NE	44.2 224.8	105.92 BMLD20080523AEY	41 50 21.0 103 49 53.0	0.390 238	25.3 1532	17.1 Educational Media Foundati	58.7	54.9
202A	KVAM Kimball	LIC _CX NE	87.5 268.2	100.13 BLED20110407ACO	41 11 36.0 103 31 45.0	0.510 86	16.5 1527	11.0 Cedar Cove Broadcasting, I	62.3	55.4
204A	KMKZ Red Feather Lakes	LIC _CX CO	247.5 66.9	83.97 BLED20110316AAC	40 52 04.0 105 38 33.0	0.005 260	0.2 2927	10.4 3g Learning Solutions	70.7	71.7
202A	NEW Brush	CP _CX CO	136.9 317.6	134.04 BNPED20071018AYM	40 16 30.0 103 38 33.0	1.000 56	17.6 1370	12.5 Make A Difference Foundati	94.0	89.7
204A	KHIH Estes Park	LIC _VX CO	217.4 36.8	111.18 BLED20111104ACT	40 21 44.0 105 31 04.0	0.100 -49	0.7 2664	17.6 Cedar Cove Broadcasting, I	96.7	90.7
204C2	KOOW Crook	LIC _CX CO	113.8 294.9	156.18 BLED20121107ABN	40 34 57.0 103 01 56.0	22.000 197	6.1 1507	54.4 3g Learning Solutions	126.8	99.6
203A	KGNU-FM Boulder	LIC _DC_ CO	195.9 15.6	134.69 BLED20100528ADY	39 59 33.0 105 09 16.0	4.000 65	3.0 1732	31.9 Boulder Community Broadcas	116.2	100.0
201A	DKGCV Elk Mountain	LIC _CX WY	293.6 112.4	152.37 BLED20101223ACX	41 41 39.0 106 24 02.0	0.100 -32	18.6 2239	5.6 Cedar Cove Broadcasting, I	122.1	101.5
254C1	KSID-FM« Sidney	LIC _CN NE	88.3 269.3	128.26 BLH19830218AF	41 11 03.0 103 11 37.0	62.000 113	0.0 1460	0.0 Ksid Radio, Inc.	22.0R	106.8M
201A	KCFD Crawford	LIC _C_ NE	26.0 206.7	198.50 BLED20101227AAK	42 45 38.0 103 39 26.0	1.500 201	60.9 1504	17.8 Southern Cultural Foundati	117.0	114.3
202C3	KFFR Winter Park	CP _DCX CO	215.6 34.9	156.98 BNPED20071018BDM	40 00 23.0 105 47 38.0	10.000 -180	22.3 2745	14.8 Fraser Valley Community Me	120.9	119.8

CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DI ST FI LE #	LAT LNG	PWR(kW) HAAT (M)	INT(km) COR (M)	PRO(km) LICENSEE	Page # 2 *IN* (Overlap in km)		*OUT*
202A Fraser	1212100	APP _CX CO		215. 6 34. 8	163. 76 BNPED20071017AHY	39 57 23. 0 105 50 22. 0	1. 000 45	14. 2 2640	10. 2 Rv Mini stries, Inc.	135. 8		133. 6
202A Idaho Springs	1205743	APP DVX CO		207. 3 26. 7	178. 03 BNPED20071019AI Y	39 43 56. 0 105 40 38. 0	2. 000 -195	12. 5 3018	6. 8 Clear Creek Radio, Inc	152. 2		142. 9
201C2 Glenwood Springs	KDNK	LIC _DEX CO		230. 1 48. 4	296. 74 BLED20041022ABU	39 25 08. 0 107 22 10. 0	1. 200 775	134. 7 3227	58. 5 Carbondale Communi ty Acces	148. 1		185. 2
201A Wray	KHTU	LIC _VX CO		119. 1 300. 7	242. 61 BLED20110516AAA	40 04 24. 0 102 14 03. 0	0. 100 -38	18. 6 1097	5. 6 Home Town Radio	200. 9		165. 7
204C3 Douglas	KKAW	LIC _CX WY		347. 5 167. 2	193. 35 BLED20110526AJI	42 51 29. 0 105 14 03. 0	7. 000 73	2. 3 1630	23. 4 Wren Communi cations, Inc.	173. 5		166. 0
202A Pine	1212074	APP _CX CO		195. 0 14. 7	200. 41 BNPED20071022AZK	39 24 56. 0 105 19 40. 0	0. 100 21	8. 0 2203	5. 6 The North Fork Angling Soc	176. 7		176. 4
203A Steamboat Springs	KRNC	LIC _CX CO		247. 3 65. 9	195. 52 BLED20060418ADQ	40 27 43. 0 106 50 57. 0	0. 240 183	1. 1 2528	7. 0 Communi ty Radio Of Norther	181. 2		184. 3
202C3 Casper	KKRR	LIC NVX WY		322. 9 141. 8	221. 97 BLED20080822AAC	42 44 26. 0 106 21 34. 0	0. 500 526	23. 5 2464	16. 3 Wcn, Inc.	183. 9		182. 2
204C1 Manitou Springs	KCME	LIC _CY CO		182. 6 2. 5	268. 43 BLED19990203KA	38 44 40. 0 104 51 41. 0	12. 000 668	7. 0 2918	81. 5 Cheyenne Mountain Public B	244. 1		185. 4
255A Steamboat Springs	KTYV«	LIC _CX CO		247. 3 65. 9	195. 54 BLH20120827ADA	40 27 43. 0 106 50 58. 0	0. 800 183	0. 0 2531	0. 0 Don Tl apek	10. 0R		186. 0M
202C3 Pine Ridge	KVKR	LIC DCX SD		42. 0 223. 3	252. 60 BLED20110209ACY	42 49 47. 0 102 39 08. 0	10. 000 133	44. 1 1279	28. 2 Southern Cultural Foundati	186. 6		192. 1
204A Breckenridge	KMPB	LIC _CX CO		211. 3 30. 5	215. 61 BLED20090724ADM	39 29 44. 0 106 01 44. 0	0. 300 -76	1. 2 3246	20. 5 Communi ty Radio For Northe	200. 8		190. 1
202A Craig	KPYR	LIC _C_ CO		255. 7 73. 8	252. 44 BLED20051021ACN	40 33 50. 0 107 36 40. 0	0. 250 271	34. 8 2283	23. 2 Public Broadcasting Of Col	204. 9		212. 2
203A Vail	KVJZ	LIC _CX CO		221. 0 39. 9	225. 64 BLED20091112AJH	39 36 56. 0 106 26 57. 0	5. 000 -241	1. 6 2730	15. 0 Rocky Mountain Public Broa	210. 1		209. 0
204C3 Pine Ridge	KVKR	CP _CX SD		42. 0 223. 3	252. 60 BPED20110304ACF	42 49 47. 0 102 39 08. 0	6. 000 133	2. 5 1279	25. 1 Southern Cultural Foundati	228. 3		224. 5
255C Pueblo	KKMG«	LIC _CY CO		182. 6 2. 5	268. 34 BLH19951005KA	38 44 43. 0 104 51 41. 0	72. 000 695	0. 0 2946	0. 0 Radio Li cense Holding Cbc,	29. 0R		239. 8M
204A Burlington	KTMJ	LIC _CX CO		134. 0 315. 6	292. 58 BLED20121018ABQ	39 18 24. 0 102 16 39. 0	0. 250 72	1. 1 1328	10. 6 Educational Communi cations	268. 7		279. 7

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= - Zone 2, Co to 3rd adjacent.
All separation margins (if shown) include rounding
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"-"affixed to 'IN' or 'OUT' values = site inside protected contour.
« = Station meets FCC minimum distance spacing for its class.
Reference station has protected zone issue:

* Station being modified by this application.

FIGURE 2 - DETAILED INTERFERENCE STUDY WITH KDNR(CP)
KAIX CHEYENNE, WY, CH. 201A

FMCommander Single Allocation Study - 10-20-2013 - NGDC 30 SEC
KAIX's Overlaps (In= 12.28 km, Out= 0.32 km)

KAIX CH 201 A
Lat= 41 09 35.0, Lng= 104 43 18.0
1.8 kW 62.4 M HAAT, 1898 M COR
Prot.= 60 dBu, Intef.= 100 dBu

KDNR-C CH 204 A DA BPED20120418AAT
Lat= 41 06 02.0, Lng= 105 01 29.1
1.0 kW 129 M HAAT, 2153 M COR
Prot.= 60 dBu, Intef.= 100 dBu

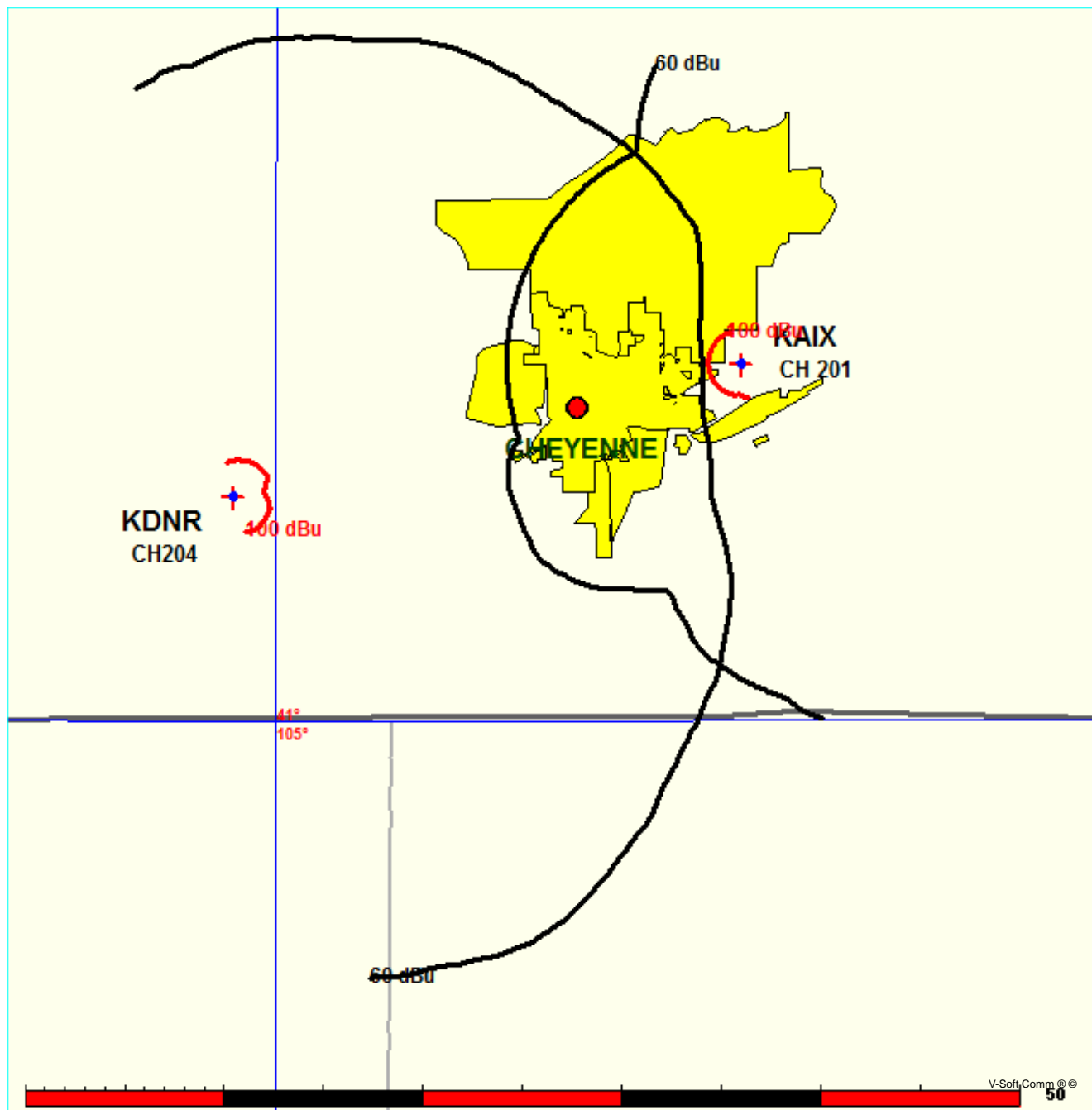


FIGURE 3 - PRESENT AND PROPOSED 60 DBU
KAIX CHEYENNE, WY, CH. 201A

Coverage Study - NGDC 30 SEC
10-20-2013

